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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,752	06/01/2001	Takeshi Omatsu	SAEGUS2.001AUS	1632
20995	7590	11/16/2004	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			SIEFKE, SAMUEL P	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			1743	

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

HK2

Office Action Summary	Application No. 09/871,752	Applicant(s) OMATSU ET AL.	
	Examiner Samuel P Siefke	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-10 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

New Status

The current application has been re-opened to apply 2 prior art references and we regret the late date their application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims **1,2,4-7,10** are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11-140360.

JP '360 teaches an ozone detector with a substrate containing a color change layer and a non-color change layer, where at least part or whole of the color-change layer is exposed to ozone during used. The color change layer comprises an anthraquinone dye and a cationic surfactant, such as a quaternary ammonium salt (alkyltrimethylammonium salt; abstract). It is inherent that in the detector described in the reference, the non-color changing layer must necessarily "overcoat" the color-

changing layer, at least partially (abstract; page 2, para. 13). There is essentially no difference between the claimed invention and the teachings of the reference. JP '360 further discloses that the anthraquinone dye has at least one amino group species selected from the class consisting of primary and secondary amino groups (abstract; page 2, para 12). The quaternary ammonium salt is an alkyltrimethylammonium salt (abstract). The ozone sensitive ink further contains an extender (page 3, para. 17 and 19) or resinous binders (page 3, para. 17 and 18). The ozone sensitive ink further contains a color component which does not change color in an ozone atmosphere (page 4, para. 25).

Claims **1, 2, 4-7** and **10** are rejected under 35 U.S.C. 102(e) as being anticipated by Omatsu (USPN 6,117,685).

Omatsu discloses an ozone detector that comprises a substrate containing a color-change layer and a non-color change layer, where at least part or whole of the color-change layer is exposed to ozone during used (col. 2, lines 21-26; col. 2, lines 59-65). The color-change layer comprises an anthraquinone dye and a cationic surfactant, such as a quaternary ammonium salt. It is inherent that in Omatsu the non-color changing layer must necessarily "overcoat" the color-changing layer, at least partially. There is essentially no difference between the claimed invention and the teachings of the reference. The anthraquinone dye has at least one amino group species selected from the class consisting of primary and secondary amino groups (col. 5, lines 53-58). The quaternary ammonium salt is an alkyltrimethylammonium salt (col. 6, lines 23-34). The ozone sensitive ink further contains an extender (col. 6, lines 42-45 and lines 53-

60) or resinous binders (col. 6, lines 42-52). The ozone sensitive ink further contains a color component which does not change color in an ozone atmosphere (col. 7, lines 23-28). The overcoat layer does not contain a coloring agent (col. 3, lines 1-11).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims **1,2,4-10** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 11-140360.

JP '360 teaches an ozone detector with a substrate containing a color change layer and a non-color change layer, where at least part or whole of the color-change layer is exposed to ozone during used. The color change layer comprises an anthraquinone dye and a cationic surfactant, such as a quaternary ammonium salt

(alkyltrimethylammonium salt). It is inherent that in the detector described in the reference, the non-color changing layer must necessarily "overcoat" the color-changing layer, at least partially. The only difference between the claimed invention and the teachings of the primary reference is the Applicant describes the indicator as containing an overcoat over the color-change layer containing the dye and the detergent.

Therefore, in view of the differences between the subject matter as a whole sought to be patented and the totality of the teachings of the prior art, as established above, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains, to follow the teachings of JP 411140360 and claim the same structure for the ozone detector as containing an overcoat over the ozone detector layer, because it is a conventional practice in any detection method or product to provide an inert overcoat on the sensitive layer until the test is done. It would have been obvious to one of ordinary skill in the art to protect the ozone-sensitive layer from exposure to the atmosphere, until the layer is ozone in the test area. With respect to the overcoat layer comprising a film-forming polymer (polyvinyl alcohol), it would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify JP '360 to use a polymer composition as the overcoat layer because polymers provide excellent durability when exposed to the elements and also because it is known in the art to use polymers for overcoat layers.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel P Siefke whose telephone number is 571-272-1262. The examiner can normally be reached on M-F 7:00am-5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1700. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sam P. Siefke



November 8, 2004


Jill Warden
Supervisory Patent Examiner
Technology Center 1700